

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-10 (cancelled)

Claim 11 (Currently amended) Ball-and-socket joint having a joint pin provided with a joint ball (1.1), a plastic joint housing (2) into which is inserted a bearing shell (3) for rotatable and tiltable support of the joint ball (1.1), ~~the bearing shell (3) being a one piece member having an open end portion through which the joint pin extends and a support portion that contacts and supports the joint ball (1.1), a~~ metal ring (4) to positively lock the bearing shell (3) within the joint housing (2), the metal ring (4) having a cylindrical center part (4.1) having inner and outer surfaces, the plastic joint housing (2) abutting against the outer surface of the cylindrical center part (4.1), the inner surface of the cylindrical center part (4.1) having a diameter that corresponds to an outside diameter of the bearing shell (3) and is in abutting engagement with the outside diameter of the bearing shell (3) when the bearing shell is received in the plastic joint housing (2), the metal ring (4) having a radially outwardly angled flange (4.2) that is ~~embedded in~~ surrounded by plastic material of the joint housing (2), the metal ring (4) having a radially inwardly bent end segment (4.3) located in an area of an opening in the joint housing

(2) that is provided for passage of the joint pin (1), the radially inwardly bent end segment (4.3) ~~abutting the open end portion of the bearing shell (3) and securing the bearing shell (3) within the joint housing (2), an inside diameter of a cylindrical center part (4.1) of the metal ring (4) corresponds to an outside diameter of the bearing shell (3).~~

Claim 12 (cancelled)

Claim 13 (Previously presented) Ball-and-socket joint as claimed in claim 24, characterized in that the flange (4.2) protrudes at an approximately 90° angle from the cylindrical center part (4.1) of the metal ring (4).

Claim 14 (Previously presented) Ball-and-socket joint having a joint pin provided with a joint ball (1.1), a plastic joint housing (2) into which is inserted a bearing shell (3) for rotatable and tiltable support of the joint ball (1.1), the bearing shell (3) being a one-piece member having an open end portion through which the joint pin extends and a support portion that contacts and supports the joint ball (1.1), a metal ring (4) to positively lock the bearing shell (3) within the joint housing (2), the metal ring (4) having a radially outwardly angled flange (4.2) that is embedded in the joint housing (2), the metal ring (4) having a radially inwardly bent end segment (4.3) located in an area of an opening in the joint housing (2) that is provided for passage of the joint pin (1), the radially inwardly bent end segment (4.3) abutting

the open end portion of the bearing shell (3) and securing the bearing shell (3) within the joint housing (2); an inside diameter of a cylindrical center part (4.1) of the metal ring (4) corresponds to an outside diameter of the bearing shell (3), wherein the cylindrical center part (4.1) of the metal ring (4) is interposed between and connects the radially inwardly bent end segment (4.3) and the radially outwardly angled flange (4.2), the radially outwardly angled flange (4.2) being located in an area of an equator (Ä) of the joint ball (1.1).

Claim 15 (cancelled)

Claim 16 (Previously presented) Ball-and-socket joint as claimed in claim 25 characterized in that the bearing shell (3) also includes a head-side area, facing away from the joint pin (1), that is provided with indentations (3.2) which extend parallel to a joint axis (L).

Claim 17 (Previously presented) Ball-and-socket joint as claimed in claim 16 characterized in that the slits (3.1) and indentations (3.2) are formed in the bearing shell (3) so as to be mutually offset in circumferential direction.

Claim 18 (Previously presented) Ball-and-socket joint having a joint pin provided with a joint ball (1.1), a plastic joint housing (2) into which is inserted a bearing shell (3) for rotatable and tiltable support of the joint ball (1.1),

the bearing shell (3) being a one-piece member having an open end portion through which the joint pin extends and a support portion that contacts and supports the joint ball (1.1), a metal ring (4) to positively lock the bearing shell (3) within the joint housing (2), the metal ring (4) having a radially outwardly angled flange (4.2) that is embedded in the joint housing (2), the metal ring (4) having a radially inwardly bent end segment (4.3) located in an area of an opening in the joint housing (2) that is provided for passage of the joint pin (1), the radially inwardly bent end segment (4.3) abutting the open end portion of the bearing shell (3) and securing the bearing shell (3) within the joint housing (2); an inside diameter of a cylindrical center part (4.1) of the metal ring (4) corresponds to an outside diameter of the bearing shell (3), wherein the joint housing (2) in the area of the opening is provided with a ring groove (2.1) that is adapted to receive a ball-side end of a sealing bellows (5).

Claims 19-21 (cancelled)

Claim 22 (Previously presented)      Ball-and-socket joint comprising:

    a joint pin having a joint ball;  
    a bearing shell for supporting the joint ball of the joint pin, the joint ball being rotatable and, to a limited extent, tiltable relative to the bearing shell;

a joint housing for supporting the bearing shell, the joint housing having an opening for receiving the bearing shell; and

a metal ring having a cylindrical portion, the cylindrical portion of the metal ring protruding from the opening of the joint housing and forming a passage receiving the bearing shell, an inside diameter of the metal ring comprising a guide surface for engaging and receiving an outside diameter of the bearing shell and for guiding the bearing shell into the joint housing, the metal ring also having a radially inwardly bent end segment for securing the bearing shell within the joint housing,

the metal ring further including a radially outwardly extending flange portion, the radially outwardly extending flange portion extending into and being embedded in the joint housing for anchoring the metal ring within the joint housing,

the joint ball having an equator, the radially outwardly extending flange portion of the metal ring extending into the joint housing at a location near the equator of the joint ball.

Claim 23 (Previously presented)      Ball-and-socket joint comprising:

a joint pin having a joint ball;

a bearing shell for supporting the joint ball of the joint pin, the joint ball being rotatable and, to a limited extent, tiltable relative to the bearing shell;

a joint housing for supporting the bearing shell, the joint housing having an opening for receiving the bearing shell;

a metal ring having a cylindrical portion, the cylindrical portion of the metal ring protruding from the opening of the joint housing and forming a passage receiving the bearing shell, an inside diameter of the metal ring comprising a guide surface for engaging and receiving an outside diameter of the bearing shell and for guiding the bearing shell into the joint housing, the metal ring also having a radially inwardly bent end segment for securing the bearing shell within the joint housing; and

a sealing bellows, the joint housing includes a ring groove for receiving a portion of the sealing bellows, the ring groove being located radially outwardly of the cylindrical portion of the metal ring.

Claim 24 (Previously presented) Ball-and-socket joint having a joint pin provided with a joint ball (1.1), a plastic joint housing (2) into which is inserted a bearing shell (3) for rotatable and tiltable support of the joint ball (1.1), and a metal ring (4) to positively lock the bearing shell (3) within the joint housing (2), the metal ring (4) is embedded in the joint housing (2) and has a radially inwardly bent end segment (4.3) located in an area of an opening in the joint housing (2) that is provided for passage of the joint pin (1), characterized in that an inside diameter of a cylindrical center part (4.1) of the metal ring (4) corresponds to an

outside diameter of the bearing shell (3), the metal ring (4) having a radially outwardly angled flange (4.2) that is extrusion-coated with material of the joint housing (2).

Claim 25 (Previously presented) Ball-and-socket joint having a joint pin provided with a joint ball (1.1), a plastic joint housing (2) into which is inserted a bearing shell (3) for rotatable and tiltable support of the joint ball (1.1), and a metal ring (4) to positively lock the bearing shell (3) within the joint housing (2), the metal ring (4) is embedded in the joint housing (2) and has a radially inwardly bent end segment (4.3) located in an area of an opening in the joint housing (2) that is provided for passage of the joint pin (1), characterized in that an inside diameter of a cylindrical center part (4.1) of the metal ring (4) corresponds to an outside diameter of the bearing shell (3), the bearing shell (3) includes a pin-side area that is provided with slits (3.1) which extend up to an area of an equator (Ä) of the joint ball (1.1).

Claim 26 (Previously presented) Ball-and-socket joint as claimed in claim 11, characterized in that the metal ring (4) protrudes outwardly of the plastic joint housing (2) such that the radially inwardly bent end segment (4.3) is spaced away from the joint housing (2) in the area of the opening of the joint housing (2), the open end portion of the bearing shell (3) also protruding outwardly of the plastic joint housing (2)

and being secured relative to the joint housing (2) by the radially inwardly bent end segment (4.3).

Claim 27 (Currently amended) Ball-and socket joint comprising:

a joint pin (1) provided with a joint ball (1.1);

a plastic joint housing (2) into which is inserted a bearing shell (3) for rotatable and tiltable support of the joint ball (1.1);

a metal ring (4) to positively lock the bearing shell (3) within the joint housing (2);

the metal ring (4) having a radially outwardly angled flange (4.2) being embedded in the joint housing (2);

the metal ring (4) having a radially inwardly bent segment (4.3) located in an area of the opening in the joint housing (2) that is provided for the passage of the joint pin (1) and the radially inwardly bent segment (4.3) secures a position of the bearing shell (3) within the joint housing (2); and

an inside diameter of a cylindrical center part (4.1) of the metal ring (4) corresponds to an outside diameter of the bearing shell (3), the cylindrical center part (4.1) of the metal ring (4) includes inner and outer surfaces, plastic material of the joint housing (2) engaging only the outer surface of the cylindrical center part (4.1), the inner surface of the cylindrical center part (4.1) being free of plastic material from the joint housing (2).



Claim 28 (New) Ball-and-socket joint as claimed in claim 27 wherein the bearing shell (3), when secured in the joint housing (2), abuts against the inner surface of the cylindrical center part (4.1) of the metal ring (4) so that the cylindrical center part (4.1) of the metal ring (4) is interposed between the bearing shell (3) and the joint housing (2).

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